vol. vii., p. 269, regards them as a single species, *C. exilis*, *C. rnficeps* being catalogued as a species occupying N.E. Africa.

On the 12th of December last I obtained a skin of a female *C. lineocapilla* which had mated with a male of *C. ruficeps.* The nest is a grassy, domed, side-entranced structure, appended to the long sheathing leaves of dry grass tussocks up to three feet from the ground, with richly-coloured blue eggs hidden from view. Owing to the wariness of the builders, the nests are difficult to procure, for you may lay in cover a considerable time before the strategy of the bird in wending its way among the tussocks before arrival at the nest is discovered.

(To be continued).

## NOTES ON THE PALLID CUCKOO.

By A. J. CAMPBELL.

(Read before the Field Naturalists' Club of Victoria, 14th June, 1897.) In the proper season the Pallid Cuckoo, Cuculus pallidus, Lath., may be either seen, or heard by its melancholy cry, in nearly every part of Australia and Tasmania. It may be considered migratory in its movements; and, according to the kind of season in certain quarters, appears in greater or less numbers. For instance, during the periods of great drought in the interior and Queensland, decidedly more of these birds visit, say, Victoria, or the seaboard country.

In the south, the first Pallid Cuckoo of the season is generally heard about the middle or end of August, or the beginning of September. However these would appear, as far as my observations go, to be preceded by silent birds of the same species, which may be seen about the timber or perched on fences or on telegraphic wires about the beginning of August. Why these forerunners should be silent, or whether they are all one sex, has not been ascertained.

The first Pallid Cuckoo's egg is deposited in the selected foster-parent bird's nest about the middle or towards the end of September. October and November constitute the chief laying time, while a few birds lay during the beginning of December. When summer is ended, or about the end of March, all the Pallid Cuckoos—old and their young—retire northward.

Whether the Pallid Cuckoo lays more than one egg (it probably does) is not definitely settled, but its single and beautiful flesh-coloured egg is found in various insectivorous or semi-insectivorous birds' nests in Queensland, as well as the southern provinces, including Tasmania.

Among the foster-parents, Gould mentions the various Ptilotes and Melithrepti (Honey-eaters), but we possess no data to show

By WHOM FIRST

that he should have included the Maluri (Wrens) and Acanthizæ

(Tits) for this particular cuckoo.

The following is an enumeration of the foster-parents of the Pallid Cuckoo, as far as are known at present, the majority being now recorded for the first time, namely:—

		BY WHOM FIRST
VERNACULAR NAME.	SCIENTIFIC NAM:	e. Recorded or
	REPORTED.	
White-plumed Honey-eater	Ptilotis penicillata	A. J. C.
Wallow tufted	1) ' ' '	15 15
Vallow forcal		*
	P. chrysops	** **
Fuscous	P. fusca	,,,
Vellow-throated ,,	P. flavigularis	A. E. Brent, Tas.
White-eared ,,	P. leucotis	C. French, jun.
Lunulated ,,	Melithreptus lunulatus	
Brown-headed ,,	M. brevirostris	G. E. Shepherd
Black-headed ,,	M. melanocephalus	A. E. Brent, Tas.
Strong-billed ,,	M. validirostris	
Wattle-Bird	Acanthochæra carunci	ılata L. Palmer
Brush Wattle-Bird	A. mellivora	A. J. C.
Spinebill	Acanthorhynchus teni	
Friar Bird	Philemon corniculatus	
Minah	Myzantha garrula	
Brown Honey-eater	Glycyphila ocularis	Messrs. Barnard, Q.
New Holland Honey-eater		diæ G. E. Shepherd
TT 1 1 TO 1 1	Petroeca bicolor	J. T. Gillespie
	and the second s	70 11 10 1
Dusky ,, Oriole	P. vittata Oriolus viridis	
		A. J. C.
Rufous-banded Thickhead	Pachycephala rufogula	
White-throated ,,	P. gutturalis	•••
Black and White Fantail	Rhipidura tricolor	,,
Brown Flycatcher	Micrœca fascinans	H. Lau, Q. (Oct.,
		1868)
Leaden-coloured Flycatcher	Myiagra rubecula	G. E. Shepherd
Wood Swallow	Artamus sordidus	J. T. Gillespie
White-browed Wood-		
Swallow	A. superciliosus	A. Campbell, jun.
Masked Wood-Swallow	A. personatus	G. E. Shepherd
White-rumped Wood-		1
Swallow	A. leucogaster	Messrs. Barnard, Q.
Harmonious Thrush	Collyriocincla harmon	
Magpie Lark	Grallina picata	I. Sommers
Caterpillar-catcher	Lalage tricolor	A. J. C. and G. E.
Caterpinal-catellei	Latage tricolor	
		Shepherd.

It will appear from the foregoing list of foster-parents of the Pallid Cuckoo that the Honey-eaters are the most favoured tribe, but in every case birds that construct an open nest are selected.

To the list must be added the introduced birds, the Greenfinch, Ligurinus chloris, and Blackbird, Turdus merula, for Mr. Charles French, jun., writes me:—"An egg of the Pallid Cuckoo was taken in the nest of the Greenfinch at Albert Park (near Melbourne) on the 24th November, 1894. I also found an egg of the Pallid Cuckoo some time ago in the nest of the English

Blackbird in the same park." I had heard previously of the Greenfinch being a foster-parent, which is remarkable, seeing that the finch is a seed-eater, or nearly so. However, although the egg is deposited in the finch's nest, we have no evidence that it rears the young cuckoo.

Among Mr. J. T. Gillespie's cuckoo notes for 1893, a season when these birds were plentiful, are the following relating to the

Pallid Cuckoo:—

"28th October, at Springvale.—Single egg of Pallid Cuckoo in nest of Wood Swallow, *Artamus sordidus*. Saw birds previously building their nest, which was afterwards apparently deserted.

"9th November, at Dandenong Creek.—Nest of Lunulated Honey-eater, *Melithreptus lunulatus*, containing 2 eggs and an egg of Pallid Cuckoo.

"11th November, at Springvale.—From Hooded Robin's, Petræca bicolor, nest (found building the previous week) took

egg of Pallid Cuckoo.

"25th November, at Springvale.—In White-plumed Honey-eater's, Ptilotis penicillata, 1 egg and an egg of Pallid Cuckoo.

"3rd December-Took Pallid's egg from nest of Greenfinch

(introduced bird). Finch afterwards laid 4 eggs."

At a meeting of the Royal Society of Victoria, held November, 1894, I read the following note on the occurrence of the egg of the Pallid Cuckoo in the nest of the Magpie Lark

(Grallina):-

"My friend, Master John Sommers, of Cheltenham, presented me with a nest taken in the locality, on the 24th September, 1894, containing a set of 5 eggs of the Grallina, together with an egg of the Pallid Cuckoo, *U. pallidus*. This is the first instance, as far as I am aware, of an egg of this cuckoo having been found in the nest of a Grallina."

In the cuckoo's egg, incubation was further advanced than in

the other eggs.

Occasionally two cuckoos' eggs are found in the same nest. Here is one of Mr. Charles French's, jun., notes thoughtfully sent to me—" White-throated Thickhead's, Pachycephala gutturalis, nest, containing I fresh egg of Thickhead and 2 fresh eggs of Pallid Cuckoo. Locality, Dandenong Ranges. 9th September,

895

Usually it seems that the cuckoo's egg is the first deposited in the nest, and, not unfrequently, before the completion of the nest, as the finding of a Pallid Cuckoo's egg underneath the warm lining of a Lunulated Honey-eater's nest attests. Once Mr. G. E. Shepherd found an egg of the Pallid Cuckoo sticking through the bottom of a White-plumed Honey-eater's nest, the egg being plainly visible from the ground.

The fact that the cuckoo, after laying its egg, carries it in its mouth till deposited in the nest of a foster-bird, is now generally admitted. Here is a proof:—The late Mr. H. A. Smith, of Batesford, near Geelong, informed me that on one occasion he shot a Pallid Cuckoo, and removed from the back of its throat or gape an egg, which was fractured by the bird's fall. Evidently the unfortunate bird had laid the egg, and was in the act of conveying it to some suitable nest.

It is probable that the Pallid Cuckoo lays its egg first upon the ground, and possibly early in the morning, because that is the time generally when these birds have been flushed from the ground. In his daylight rambles Mr. Shepherd has frequently disturbed on

the ground a cuckoo with suspicious movements.

Mr. W. A. Milligan furnished me with the somewhat remarkable note that in Gippsland he had observed an adult Pallid Cuckoo feeding a young bird of its own kind. Mr. Milligan noticed no other birds about at the time. Miss Ada Fletcher, Tasmania, writing to the Australasian, 30th May, 1896, states:—"I myself have seen a full-grown Pallid Cuckoo feeding a young one of the same species. The young one, when flushed, flew feebly, and I judged it had only recently left the foster-parents' nest." These notes suggest interesting questions. Do cuckoos sometimes assist the foster-parents in feeding the young, or had these particular youngsters lost their foster-parents?

I am inclined to believe that many birds, by instinct, feed young cuckoos, whether they be the rightful foster-parents or not. Only last season Master B. E. Bardwell watched a young cuckoo, probably a Pallid or else a Fantailed, being fed by a Scarlet Robin, *P. leggii*, and then, immediately, by a Spine-billed Honey-eater. The little Honey-eater appeared not only to put its long bill, but head also, well into the mouth of the youthful cuckoo. It is hardly likely that the Spinebill was trying to retrieve for itself the bait placed by the robin in the throat of

the cuckoo.

With reference to the two last statements, namely, that young cuckoos are sometimes fed by old cuckoos, as well as by birds other than the proper foster-parents, we have further proof in the published remarks of Dr. Ramsay in New South Wales.

Following the same plan as in the case of the Bronze Cuckoos, the Messrs. Ramsay succeeded in procuring two young Pallid Cuckoos from eggs which they (Ramsays) had left in the nest of the Yellow-tufted Honey-eater, *P. auricomis*, and thus first estab

lished the parentage of the strange eggs.

The cuckoo's egg is hatched about the twelfth or fourteenth day, when the young cuckoo—a little, fat, helpless creature—is scarcely larger than its foster brethren. However, growing rapidly, it soon fills up the greater part of the nest, and its un-

fortunate companions, either smothered by its weight or starved to death through its greediness, are thrown out by their parents.

Dr. Ramsay proceeds to say: -

"On the 30th October last (1864) we found two unhappy young birds, which had been hatched in company with a cuckoo in a nest of *Ptilotis auricomis*, tossed out and lying upon the ground just under the nest. These were, of course, quite dead,

and appeared to have been about three or four days old.

"During the months of October and November, it is no uncommon sight to see the smaller birds feeding the young of cuckoos. Even the little Acanthizæ, which I believe are never the foster-parents, at least of the Pallid Cuckoo, join in supplying the wants which are easily made known by their continued peevish cry, stopping only when being fed, or when their appetites

are appeased.

"While walking towards home through a half-cleared paddock, I was not a little surprised, upon hearing the cries of a young cuckoo, to see a pair of adult birds of the same species, C. pallidus, flying after it, settling beside it, and apparently paying it great attention. Several times they flew away, but returned to it again, and, from their actions I feel convinced that they were feeding it, although, much to my regret, I was unable to obtain a

view sufficiently close to make sure of the fact."

I may mention, in reference to the throwing-out business, some persons suppose that the cuckoo throws out an egg or eggs of the toster parent to make room for its own. This has not been proved with regard to the Pallid Cuckoo-indeed, it has been disproved by the fact that the cuckoo's egg is frequently deposited first, or even before the nest is completed, and that full clutches of the foster-bird's have been taken together with the cuckoo's egg. On the other hand, it is probable that some of the fosterbirds throw out cuckoo's eggs. When taking a White-shouldered Caterpillar-catcher's, Lalage tricolor, nest at Somerville with Mr. Shepherd, we found a broken egg of the Pallid Cuckoo underneath upon the ground—circumstantial evidence, I think, that the egg had been deposited by the cuckoo in the Caterpillarcatcher's nest, and thrown overboard by the latter bird. There is no record of any cuckoo's egg having actually been taken from a Caterpillar-catcher's nest, but Mr. Shepherd has seen a Caterpillar-catcher feeding a young Pallid Cuckoo.

In concluding these brief and somewhat scattered observations on the Pallid Cuckoo, I have to thank my many friends for their field observations, especially Mr. G. E. Shepherd, who, fortunately, has been so favourably situated that he has been enabled to observe Pallid Cuckoos' eggs in no less than nineteen different species of nests—a record which any field naturalist may well be

proud of.